Construction Zone Design Speed, V (mph)	f_{max} for Open-Roadway Conditions	Normal Crown Section Minimum Radius, R_{min} (fty), e = -0.02	Superelevated Section Minimum Radius, R_{min} (ft), e= +0.08
20	0.17	180	110
25	0.17	280	170
30	0.16	430	250
35	0.15	630	360
40	0.15	820	470
45	0.14	1130	620
50	0.14	1390	760
55	0.13	1840	960

Notes:

1. *Curve Radus. The radius is calculated from the equation as follows:*

$$R_{\min} = \frac{V^2}{15\,(e + f_{\max})};$$

values shown in the table for design have been rounded up to the next higher 10-ft increment.

2. *Normal Crown Section. If the normal crown section is maintained through the horizontal curve, the superelevation rate is -0.02 assuming a typical cross slope of 2%. Therefore, the R_{min} column with e = -0.02 lists the minimum radii which can be used if retaining the normal section through the horizontal curve.*

3. *Other Radii. For a proposed radius or superelevation rate intermediate between the table values, the equation in Note 1 may be used to determine the proper curvature layout. For example, if the construction zone design speed is 55 mph and the proposed curve radius is 1000 ft, then the superelevation rate is determined as follows:*

$$e = \frac{V^2}{15\,R} - f$$

$$e = \frac{(55)^2}{(15)(1000)} - 0.12$$

$$e = +0.07$$

MINIMUM RADIUS FOR HORIZONTAL CURVE
(Construction Zone)

Figure 82-3A